



Attorney Docket No. 25865

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Group Art Unit: 3752

KHAIN et al.

Examiner: unknown

Serial No. 10/726,563

Filed: December 4, 2003

For: **METHOD AND APPARATUS FOR CONTROLLING ATMOSPHERIC CONDITIONS**

TRANSMITTAL LETTER

Commissioner of Patents  
P.O. Box 1450  
Alexandria, Va 22313-1450

Sir:

Submitted herewith for filing in the U.S. Patent and Trademark Office is the following:

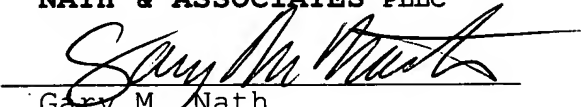
- (1) Transmittal Letter;
- (2) Information Disclosure Statement;
- (3) PTO Form 1449 with 44 references;
- (4) International Search Report dated 25 March 2003.

The Commissioner is hereby authorized to charge any deficiency or credit any excess to Deposit Account No. 14-0112.

Respectfully submitted,

**NATH & ASSOCIATES PLLC**

By:

  
Gary M. Nath

Registration No. 26,965

Marvin C. Berkowitz

Registration No. 47,421

Customer No. 20529

Date: March 31, 2004

NATH & ASSOCIATES PLLC

1030 15<sup>th</sup> Street NW - 6<sup>th</sup> Floor

Washington, D.C. 20005

GMN/MCB/ng/tj:IDS/FR



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re Application of:

Group Art Unit: 3752

KHAIN et al.

Examiner: unknown

Serial No. 10/726,563

Filed: December 4, 2003

For: **METHOD AND APPARATUS FOR CONTROLLING ATMOSPHERIC CONDITIONS**

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

An Information Disclosure Statement is submitted herewith pursuant to 37 C.F.R. § 1.97-1.98. Please note the following particulars:

[NOTE: One only of items a, b, c, and d must be checked.]

- [ X ] a. The enclosed statement is being filed within three months of the filing date of a national application, or within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application, or before the mailing date of a first Office Action on the merits, whichever event occurs last.
- [ ] b. The enclosed statement is being filed after a first action on the merits but before the mailing date of a final action under 37 C.F.R. § 1.113, or a notice of allowance under 37 C.F.R. § 1.311.

The enclosed statement is accompanied by [check one]:

- [ ] i. a certification in part (e) below as specified in 37 C.F.R. § 1.97(e), or
- [ ] ii. a check in the amount required by 37 C.F.R. § 1.17(p).
- [ ] c. The enclosed statement is being filed after the mailing date of a final action under 37 C.F.R. § 1.113, or a notice of allowance under 37 C.F.R. § 1.311, but before payment of the issue fee.
- [ ] Certification report(e) below; and
- [ ] a check in the amount as required by § 1.17(p).
- [ ] d. The enclosed statement is being filed pursuant to 37 C.F.R. § 1.97(i), for placement in the file.

[ ] e. Certification [Check one] , [Certification is required only if box (b) (i) or box (c) is checked.]

[ ] I hereby certify that each item of information contained in the enclosed Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement,

or

[ ] I hereby certify that no item of information in the enclosed Information Disclosure Statement herewith was cited in a communication from a foreign patent office in a counterpart foreign application, or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

or

[ ] Appropriate certification is attached.

[ X ] f. If no check is enclosed and a fee is due in connection with this communication or if the check enclosed is insufficient, the Commissioner is authorized to charge any fee or additional fee due in connection with this communication to Deposit Account No. 14-0112.

[ X ] g. Copies of the documents are attached herewith with a completed Form PTO-1449.

or

[ X ] Copies of the documents are not attached as allowed under CFR 1.98(d)(1)(2). The earlier application is identified as:  
or Copies of US Patents/Publications not attached as allowed in Official Gazette Aug. 5, 2003/ Vol. 1273, no. 1.

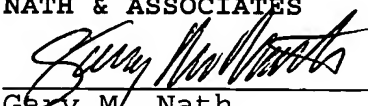
The Examiner is respectfully requested to cite the documents listed on the attached Form PTO-1449 in the next Office Action. In so doing, the Examiner is respectfully requested to initial in the space adjacent to the listing of each document on the Form PTO-1449, and return a copy of the initialed Form PTO-1449 with the next communication to Applicants, to confirm that these documents have been considered by the Examiner and made of record in this application.

If the Examiner has any questions or wishes to discuss this application, kindly telephone the undersigned at the below-listed number.

Respectfully submitted,

NATH & ASSOCIATES

By:

  
Gary M. Nath


Registration No. 26,965

Marvin C. Berkowitz

Registration No. 47,421

Customer No. 20529

Date: March 31, 2004  
NATH & ASSOCIATES PLLC  
1030 15<sup>th</sup> Street, N.W., 6<sup>th</sup> Floor  
Washington, D.C. 20005  
Tel. (202) 775-8383  
Fax. (202) 775-8396  
GMN/MCB/ng (IDS.revisedTLJ04.08.02)

	Aa	Pruppacher, H.R. et al. "Microphysics of Clouds and Precipitation", Kluwer Academ. Pub., Ch.18 pp.811-827, (1997).
	Ab	Grover, S.N. et al. "A Numerical Determination of the Efficiency with which Electrically Charged Cloud Drops and Small Raindrops Collide with Electrically Charged Spherical Particles of Various Densities", J.Atmosph.Sci., Amer.Meteor.Soc., vol.32 pp.2156-2165, (1975).
	Ac	Wang, P.K. et al. "On the Effect of Electric Charges on the Scavenging of Aerosol Particles by Clouds and Small Raindrops", J.Atmosph.Sci., Amer.Meteor.Soc., vol.35 pp.1735-1743, (1978).
	Ad	Tinsley, B.A. et al. "Effects of Image Charges on the Scavenging of Aerosol Particles by Cloud Droplets and on Droplet Charging and Possible Ice Nucleation Processes", J.Atmosph.Sci., Amer.Meteor.Soc., vol.57 pp.2118-2134, (2000).
	Ae	Bleaney, B.I. et al. "Electricity and Magnetism", Oxford Univ. Press, 3 <sup>rd</sup> Ed., vol.1 pg.58, (1976).
	Af	Batygin, V.V. et al. "Problems in Electrodynamics", Academic Press, London, pp.38-39, pg.48, pg.236, (1964).
	Ag	Meek, J.M. et al. "Electrical Breakdown of Gases", Clarendon Press, Oxford, pp.292-293, (1953).
	Ah	Pruppacher, H.R. et al. "Microphysics of Clouds and Precipitation", Kluwer Academ. Pub., Ch.18 pp.794, (1997).
	Ai	Pruppacher, H.R. et al. "Microphysics of Clouds and Precipitation", Kluwer Academ. Pub., Ch.18 pp.802, (1997).
	Aj	Press, W.H. et al. "Numerical Recipes in FORTRAN", Cambridge University Press, Ch. 16 pp.708-716.
	Ak	Pinsky, M. et al. "Collisions of Small Drops in a Turbulent Flow. Part I: Collision Efficiency. Problem Formulation and Preliminary Results", J.Atmosph.Sci., Amer.Meteor.Soc., vol.56 pp.2585-2600, (1999).
	Al	Pinsky, M. et al. "Collision Efficiency of Drops in a Wide Range of Reynolds Numbers: Effects of Pressure on Spectrum Evolution", J.Atmosph.Sci., Amer.Meteor.Soc., vol.58 pp.742-764, (2001).
	Am	Pruppacher, H.R. et al. "Microphysics of Clouds and Precipitation", Kluwer Academ. Pub., Ch.11 pp.474-479, Ch. 15 pp.630-631, (1997).
	An	Kunkel, B.A. "Parameterization of Droplet Terminal Velocity and Extinction Coefficient in Fog Models", J.Clim.Appl.Meteor., vol.23 pp.34-41, (1984).
	Ao	Zuev, V.E. "Propagation of visible and infrared radiation in the atmosphere", Israel Program for Scientific Translations Ltd., Halsted Press, pg.230, (1974).
	Ap	Bott, A. "A Flux Method for the Numerical Solution of the Stochastic Collection Equation", J.Atmosph.Sci., Amer.Meteor.Soc., vol.55 pp.2284-2293, (1998).
	Aq	Roach, W.T. et al. "The physics of radiation fog: I-a field study", Quart.J.R.Met.Soc., vol.102 pp.313-333, (1976).
	Ar	Rosenfeld, D. et al. "Deep convective clouds with sustained highly supercooled liquid water down to -37.5 °C", NATURE, Macmillan Magazines Ltd., vol.405 pp.440-442, (2000).

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP ' 609.

Draw line through citation if not in conformance and not considered.

Include copy of this form with next communication to Applicant.



FORM PTO-1449

## INFORMATION DISCLOSURE CITATION

Atty Docket  
25865Serial No.  
10/726,563Applicant  
KHAIN et al.Filing Date  
December 4, 2003Group Art Unit  
3752

## U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Issue Date	Name	Class	Sub-Class	Filing Date
	AA	3,429,507	02/25/69	Jones			07/25/66
	AB	3,613,992	10/19/71	Knollenberg			03/25/66
	AC	3,788,543	01/29/74	St. Amand et al.			09/14/72
	AD	4,096,005	06/20/78	Slusher			06/13/77
	AE	5,174,498	12/29/92	Popovitz-Biro et al.			01/15/91
	AF	5,360,162	11/01/94	Mentus			06/04/92
	AG	6,056,203	05/02/00	Fukuta			12/08/97
	AH	3,378,201	04/16/68	Glew et al.			09/09/63
	AI	3,608,810	09/28/71	Kooser			12/05/68
	AJ	3,608,820	09/28/71	Kooser			12/05/68
	AK	3,659,785	05/02/72	Nelson et al.			12/08/70
	AL	3,802,624	04/09/74	Kühne et al.			12/18/72
	AM	3,896,993	07/29/75	Serpolay			09/10/73
	AN	3,940,059	02/24/76	Clark et al.			06/04/71
	AO	4,362,271	12/07/82	Montmory			10/29/80
	AP	4,653,690	03/31/87	St. Amand et al.			11/05/84
	AQ	5,357,865	10/25/94	Mather			02/21/92
	AR	1,928,963	10/03/33	Chaffee			01/12/25
	AS	3,600,653	08/17/71	Hall			04/02/70
	AT	4,475,927	10/09/84	Loos			03/03/81
	AU	4,671,805	06/09/87	Gourdine			02/15/84
	AV	4,684,063	08/04/87	Goudy, Jr.			08/29/84

## FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Sub-Class	Translation
	AW	1,110,768	24.04.68	GB			N/A

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AX	Khain, A. et al. "Notes on the state-of-the-art numerical modeling of cloud microphysics", <u>Atmos.Res.</u> , Elsevier Science B.V., vol.55 pp.159-224, (2000).
	AY	Mather, G.K. et al. "Results of the South African Cloud-Seeding Experiments Using Hygroscopic Flares", <u>J.Appl.Meteorol.</u> , <u>Amer.Meteor.Soc.</u> , vol.36 pp.1433-1447, (1997).
	AZ	Bruintjes, R.T. "A Review of Cloud Seeding Experiments to Enhance Precipitation and Some New Prospects", <u>Bull.Amer.Meteor.Soc.</u> , vol.80(5) pp.805-820, (1999).